

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of the Claims:

1 Claim 1 (currently amended): A semiconductor laser,
2 comprising;
3 a semiconductor substrate;
4 a laser layer on said semiconductor substrate;
5 at least two waveguide ridges located at a distance from
6 said laser layer whereby electrical injection into said
7 laser layer is achieved through at least two of said
8 waveguide ridges, and
9 a first strip-shaped lattice structure comprising
10 alternating portions of conducting and non-conducting or
11 less conducting material, wherein said lattice structure is
12 located on the flat portions of the surface between said
13 ridges and at a distance from said laser layer above said
14 laser layer.

1 Claim 2 (original): A semiconductor laser according to
2 claim 1, further comprising a second strip-shaped lattice
3 structure located lateral to the two outermost of said
4 waveguide ridges, wherein said lattice structure is located
5 on the flat portions of the surfaces lateral to said
6 outermost ridges and at a distance from said laser layer
7 above said laser layer.

1 Claim 3 (original): The semiconductor laser according to
2 claim 1, wherein said lattice structure is located on a
3 barrier or insulating layer wherein said barrier defines the
4 position of said lattice structure relative to said laser
5 layer.

1 Claim 4 (original): The semiconductor laser according to
2 claim 1, wherein said lattice structure comprises a metal.

1 Claim 5 (original): The semiconductor laser according to
2 claim 4, wherein said metal is chromium or a chromium alloy.

1 Claim 6 (original): The semiconductor laser according to
2 claim 1, wherein said first strip-shaped lattice structure
3 is located adjacent to sides of said waveguide ridges, and
4 wherein the width and spacing of said waveguide ridges are
5 selected such that base points of the sides of said
6 waveguide ridges are located in a peripheral region of
7 radiation from an active zone of said laser layer.

1 Claim 7 (currently amended): A process for the production of
2 a semiconductor laser based on a semiconductor substrate
3 with a laser layer arranged on said semiconductor substrate
4 and wherein said semiconductor laser includes a strip-shaped
5 lattice structure, the process comprising the steps of:

6 a) producing a complete semiconductor laser structure
7 in ~~an~~ a continuous epitaxial process; and,
8 b) forming at least two waveguide ridges by removing
9 material from said semiconductor laser structure; and,

10 ~~e) laser structure so as to form carrier surfaces~~
11 ~~between said waveguide ridges and lateral to the outer of~~
12 ~~said waveguide ridges; and~~

13 c) forming carrier surfaces between said waveguide
14 ridges and lateral to the outermost of said waveguide
15 ridges; and,

16 d) applying a lattice structure to one or more of
17 said carrier surfaces.

1 Claim 8 (original): The process according to claim 7,
2 wherein, preceding step (d), the step of forming an
3 insulating layer on said carrier surfaces.

1 Claim 9 (original): The process according to claim 8,
2 wherein said lattice structure comprises alternating
3 portions of a conductive and non-conductive or less
4 conductive material.

1 Claim 10 (original): The process according to claim 9,
2 wherein said step of applying a lattice structure includes
3 applying a metallic lattice structure with a lithographic
4 process, comprising the steps of performing a lithographic
5 process to create a lithographic structure and metallization
6 of said lithographic structure.